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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,977	11/14/2003	Tsutomu Okabe	245166US3CIP	7502
22850	7590	11/16/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

48

Office Action Summary

Application No.

10/706,977

Applicant(s)

OKABE ET AL.

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 3 and 5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 (respectively) of copending Application No.

10/330,092. Although the conflicting claims are not identical, they are not patentably distinct from each other because they contain recitations drawn to the same structures and relationships between those structures, where there are only slight stylistic differences in the language that is used.

7. Claim 8 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over each of claims 7, 8 and 10 of copending Application No. 10/330,092.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they contain recitations drawn to the same structures and relationships between those structures, where there are only slight stylistic differences in the language that is used.

8. Claim 9 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 of copending Application No. 10/330,092. Although the conflicting claims are not identical, they are not patentably distinct from each other because they contain recitations drawn to the same structures and relationships between those structures, where there are only slight stylistic differences in the language that is used.

Art Unit: 1763

3. Claim 10 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over each of claims 1, 4, 7 and 8 of copending Application No. 10/706,915. Although the conflicting claims are not identical, they are not patentably distinct from each other because they contain recitations drawn to the same structures and relationships between those structures, where there are only slight stylistic differences in the language that is used.
4. These are provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 5-8 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,186,331 to Kinapara et al.
7. Kinapara et al. disclose a wafer processing apparatus including a mini-environment portion (Figure 2, 5) forming a pressurized chamber therein (column 7, rows 42 and 43), said apparatus comprising: a first opening (Figure 3, 23) formed on a part of a wall of the pressurized chamber formed by the mini-environment, the first opening being configured to face an opening of a clean box (Figures 2 and 3, 11) so as to allow loading and unloading of a wafer between the clean box and the mini-environment portion; a door (Figure 3, 25) configured to open and close the first opening; and a gas flow path (Figure 4, 45; also see Figure 3) formed between the door and the first opening when the door is closed, wherein a flow rate of a gas flowing through the gas flow path is substantially equal to a flow rate of the gas flowing from the pressurized chamber to the exterior of the mini-environment portion through the opening when the door is opened. The gap is the exit for gas coming from pressurized chamber

Art Unit: 1763

through the opening, thus the flow rate of gas flowing through the gap would also be substantially equal to the flow rate of gas exiting the mini-environment through the opening.

8. With respect to claim 6, which is drawn to a processing parameter for an intended method, the courts have ruled that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

9. With respect to claim 7, the gas flow path is formed by chinks that are *approximately* 2 mm wide (column 10, rows 49-53).

10. With respect to claim 8, the apparatus further comprises a protruding wall disposed on an outer surface of the mini-environment in a circumference of the opening (Figure 3, 21).

11. With respect to claim 11, when the door is closed, no portions thereof are in contact with the wall of the chamber (see Figure 3).

12. With respect to claim 12, the door further comprises a slit opening (housing opening mechanism 35, see Figures 3 and 4).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

Art Unit: 1763

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0064439 A1 to Otaguro in view of U.S. Patent No. 6,473,993 to Tokunaga.

16. Otaguro discloses a wafer processing apparatus in Figures 1-6 substantially as claimed and including a clean-environment portion having a chamber (200; paragraph 30) therein that is pressurized to a pressure higher than that of the exterior thereof (see paragraph 48) and used for transferring a wafer between a clean box (10) having a lid (13) and housing the wafer and the chamber, said apparatus comprising: a first opening portion (22) which is formed on part of a wall comprising the chamber to be communication with the chamber, facing to an opening of the clean box so as to allow loading and unloading the wafer between the clean box and the clean-environment portion; and a door (23) that closes, when the transfer of the wafer is not performed, the first opening portion and opens, when the transfer of the wafer is performed, wherein a gas flow path from the chamber to the exterior of the clean-environment portion is formed such that a flow rate of a gas flowing from the chamber to the exterior of the clean-environment portion in the case that the wafer transferring operation is not performed becomes substantially equal to a flow rate of gas coming out from a space formed from the chamber and the clean box in the case that the wafer transferring operation is performed. By providing aperture 52, the above described flow pattern is enabled, because communication is always present, regardless of whether the door is opened or closed.

17. However, Otaguro fails to teach the clean-environment as a mini-environment.

18. Tokunaga discloses the use of a mini-environment for the purpose of holding wafers in an enclosed space to thereby protect the wafers from dust particles in the atmosphere or from chemical contamination (column 1, rows 53-56 and column 2, rows 36-40)

19. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a mini-environment in Otaguro in order to hold wafers in an enclosed space to thereby protect the wafer from dust particles in the atmosphere or from chemical contamination as taught by Tokunaga.

Art Unit: 1763

20. With respect to claim 2, in Otaguro, a gas flow path of the gas flowing out from the space formed from the chamber and clean box in a case that the wafer transferring operation is performed includes a space formed around the opening of the clean box (see paragraph 46).

21. With respect to claim 3, in Otaguro, a gas flow path of the gas flowing out from the chamber to the exterior of the clean-environment portion in case that the wafer transferring operation is not performed includes an aperture (52) formed when the door closes the first opening portion (see Figure 1).

22. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinapara et al. as applied to claims 5-8 and 11-12 above, and further in view of U.S. Patent No. 6,682,629 to Kudo et al.

23. Kinapara et al. discloses the invention substantially as claimed and as described above.

24. However, Kinapara et al. fail to teach the protruding wall further comprises an eave.

25. Kudo et al. teach the use of an inflow restricting device (Figures 6-10, 98) at the opening of a wafer processing apparatus for the purpose of controlling and restricting an outside atmosphere from entering a clean environment (abstract and column 6, rows 1-5).

26. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an inflow restricting device (eave) in Kinapara et al. in order to control and restrict an outside environment from flowing into the mini-environment as taught by Kudo.

27. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinapara et al. as applied to claims 5-8 and 11-12 above, and further in view of U.S. Patent No. U.S. Patent No. 6,473,993 to Tokunaga.

28. Kinapara et al. disclose the invention substantially as claimed and as described above.

29. However, Kinapara et al. fail to teach the door comprising projections from an outer most perimeter thereof such that when the door is closed, only the projections are in contact with an outer surface of the wall of the chamber adjacent to the window opening.

30. Tokunaga disclose the use of a plurality of projections provided on a sealing surface of a load port system for the purpose of maintaining a predetermined distance between sealing surfaces thereby

Art Unit: 1763

allowing a flow of clean air from a mini-environment to the outside thereof. The projections are also provided for the purpose of allowing a closure/door to stop repeatedly at the same position with high precision (column 7, row 23 through column 8, row 31).

31. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plurality of projections on the door in Kinapara et al. in order to maintain a predetermined distance between sealing surfaces thereby allowing a flow of clean air from the mini-environment to the outside thereof and also to allow the door to stop repeatedly at the same position with high precision as taught by Tokunaga.

Response to Arguments

33. Applicant's arguments filed 8/29/05, with respect to claims 1-3 have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the first opening being configured to face an opening of the cleaning box) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant argues that Otaguro fails to disclose a gas flow path around the opening of the FOUP. While this may be true, claims 1-3 do not recite and/or necessitate that the gas flow path be located around the opening of FOUP. The claims only recite that a gas flow path is formed in a wall of the mini-environment/chamber. Examiner notes that this feature is recited in new claims 5-12, as the above rejections describe, Kinpara et al. disclose such an arrangement.

Conclusion

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1763

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Patent Examiner
Art Unit 1763
10 November 2005